Implementation Plan

GPDE 5256A: Wikis, Blogs, and Online Learning

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**Part I:**

**Theme I:**

When our time together during this class started, I defined 21st century learning skills as skills that were centered on using technology.  However, our first assignment was to read “The New World of Work and the Seven Survival Skills” from The Global Achievement Gap by Tony Wagner, I quickly realized that when we are talking about 21st century skills and 21st century learners, we aren’t only talking about technology, but about essential skills and qualities that 21st century learners need.  According to Wagner,

“Young people who want to earn more than minimum wage and who go out into the world without the new survival skills I’ve uncovered in my research are crippled for life; they are similarly unprepared to be active and informed citizens or to be adults who will continue to be stimulated by new information and ideas.” (p. 14)

As a teacher, this can both be a daunting yet empowering task:  we need to create well-rounded students that are equipped for their futures, futures in which we are unsure of the specific skills that will be required.  However, if we teach students how to learn, they will be able to pick up the specific skills necessary as their job and duties change over their career. My principal summed it up as the 4 C’s of 21st century learning: creativity, collaboration, communication and critical thinking. These are also referenced as the “super skills” by the Partnership for 21st Century Learning’s website.  I believe it is this specific skill set that the learners of the 21st century will need to be successful.

I plan to be more proactive in the fall to help foster these skills.  I also hope to use my action research to help with this.  My action research will focus on how student self-assessment with a rubric will affect the quality of student work.  I know I often have students ask if their project is ‘good enough’.  I want them to look at the set criteria in the rubric, and analyze their project, looking to see how it measures up, and in what areas it could be improved.  I hope to build in time for students to do collaboration with their peers to get some feedback.

**Theme II:**

I feel that the technology will be the tool that allows us to help foster the creativity, collaboration, communication and critical thinking.  First, let’s look at collaboration and communication.  Consider Google Docs:  students can share their work with one another from any location, and collaborate on the document in real time.  This eliminates the need for students to get transportation to and from each other’s houses.  Tools like Skype and FaceTime allow students (and teachers) to communicate with each other face-to-face if they are unable to meet.  I have had the opportunity to Skype a student for class when they were ill.  These opportunities would not have been possible fifteen years ago, and I believe that they will become more of the norm in the years to come as technology advances even more.  Our students can benefit from a good working knowledge of how to use technology to effectively collaborate and communicate.

As a math teacher, one of my most used web tools is a program called GeoGebra.  It is a free dynamic graphing software program.  I have used this in numerous classes, and I really feel that it helps to address the critical thinking.  Students can analyze what happens to a graph when a part of an equation is changed.  They can look for patterns, commonalities, and differences and they aren’t hung up on the slow, methodical process of graphing.  In my Geometry course, I would build specific shapes with special segments and we would investigate what would happen when a particular length changed.  It made the topic for the day much more concrete, and something that students could visualize.  I had several students install the program at home, and they would come in with a question that they had struggled with, and tell me they made a sketch in GeoGebra, and it helped them make sense of the problem.

**Theme III:**

In the spring of 2012, I attended the MCTM conference in Duluth, MN.  The keynote speaker on the opening day was a man by the name of Dan Meyer.  I really liked what he had to say, and decided to follow his blog.  However, I would find myself forgetting to check it, and then having a lot of reading to catch up on.  This past fall, a co-worker would send me links to activities that would be great for my Math Apps class that I was teaching.  Again, this led me to another blog that I wanted to follow, but would forget to check.  I set up an RSS feed account, and have since started following more bloggers, specifically bloggers in a math classroom.  I am amazed at how one click on one blog can take you to a wealth of information and ideas.  I would sit for hours in the evening reading different blogs and opinions on grading, math concepts, and projects.  At one point, my husband would stop and ask what I was reading because he could tell that I was completely engrossed in it.  I was blown away by the sheer volume of materials out there, and the online community of math teachers, blasting the doors off of their classrooms to let the world in to take a peek.  I feel that this specific tool (RSS feed) can really help to compensate for the lack of professional development funds in our district.  At some times, I think it might be better because it allows for professional development at any time.

Another tool that I am interested in using more for professional development is Twitter.  I know that my co-worker that would share ideas with me in the fall was getting the links and sites from people that she followed on Twitter.  I think Twitter can be a great professional development tool, and am excited to see where it will lead me over the course of the year.

**PART II:**

**Theme I:**

One skill identified by Wagner as a survival skill is effective oral and written communication.  Working to improve this skill will fit nicely in several of the projects that my students do in various classes, as well as in the journaling portion of the classes.   Oftentimes, students can solve a problem, but they cannot articulate what they did or why they did it.  I hope to improve these written skills by emphasizing them more and doing a better job of modeling effective oral and written communication.

It is my hope that with emphasizing the writing of how and why students do what they do; I will also foster an environment where students become more critical thinkers about their work.  I also plan to tie this in with my action research, and see if student evaluation and critical thinking can improve the quality of their work.  This could also work to incorporate student evaluation of written work.

Another skill that I feel needs to be improved is collaboration.  In my classroom, I did a lot of partner work and group work, but I feel that I can do a better job to teach them strategies to work together.  It has helped in the past when each group member had a specific role, so that is something I will plan to incorporate in the future, as well.

One of the challenges with spending more time on communication, critical thinking, and collaboration is that it will take a bit more time.  However, I have some units that are very similar, and could blend some of them together to make up for the extra time used.  If students can communicate more effectively, become better critical thinkers, and collaborate with one another successfully, I believe that it is time well spent.  Another roadblock at our school is the lack of technology available. If I want to take students to work using GeoGebra to investigate a geometric topic, I must reserve a specific lab during that period, and it isn’t always available. Currently, my school is not a ‘bring your own device’ school; our current infrastructure couldn’t support everyone’s devices.

**Theme II:**

I will be expanding my implementation of GeoGebra to include Math 7 (a new class for me this fall).  This will replace some graphing done by hand.  This tool will allow students to do more analyzing and critical thinking of what happens and why it happens in a graph instead of spending time simply “plugging and chugging” on a graph.

While it’s not a Web 2.0 tool, a technology 2.0 tool that I will also use often in my classroom is a set of classroom responders. This is very similar to PollEverywhere.  I will use this as a formative assessment piece to determine the level of understanding in the room.  This will take the place of some homework quizzes, and the traditional “thumbs up/down” check for understanding.

**Theme III:**

I will continue to use my RSS reader to seek new ideas for my classes.  I will plan to check it once a week and look for tips and tricks that can benefit my students.  I will also start following some education ‘gurus’ on Twitter to stay on track with innovative ideas and apps that will be useful in the classroom.

**PART III:**

**Theme I:**

As identified in Part II (Theme I), I will implement a journal in my classes to improve written communication. I will check these journals weekly, and I will have some formative assessment to see if the students are in fact improving their written communication skills. I will compare samples at the end of mid-quarter to the beginning of the year, and hopefully I will see improvement.

I will also work with critical thinking and self-assessment in regards to my action research. Students will analyze their rubric, and will determine if their work ‘measures up’, and then will have the opportunity to make improvements before submission. I’m not sure how this will turn out, but I am looking forward to it.

**Theme II:**

I will use GeoGebra in place of some of the graphing that is done in class. I won’t replace it all, but I will definitely use GeoGebra to guide students to conclusions about slope, parallel lines, etc. Since I haven’t taught Math 7 before, I will listen closely to my students’ comments and discussions to check for understanding. Another way I can check if they are getting the big idea is to have them journal about it. Oral and written communication will tie in with this theme.

**Theme II:**

Being the concrete-sequential person that I am, I have made a checklist to remind myself to check my RSS feed and Twitter each week. I have also put it into my calendar on my phone, but my hope is that it will become habit and I won’t need the reminder anymore.

**PART IV:**

As state above, when I think back to my prior definition of a 21st century learner, I thought it was all about learning with the tools. After doing research and our class discussions, I realized that there is more to a 21st century learner than just technology. I think Will Richardson said it best: “Putting technology first—simply adding a layer of expensive tools on top of the traditional curriculum—does nothing to address the new needs of modern learners.” (2013)

What it boils down to is creating 21st century learners doesn’t have as much to do about the tools as it does the learners. How can we teach students to be life-long learners, to be inquisitive, and to be analyzing all of the information that is available to them at their fingertips? Each generation will have more and more access to technology and therefore information than the previous one. “Our children and youth are immersed in technologies that give them opportunities no previous generation has enjoyed. How will schools respond?” (Rosen, 2011)

How will schools respond? How should schools respond? We should respond by ensuring that our students know how to communicate, collaborate, create, and think critically. What good is all the information at their fingertips if the students cannot think and determine what is valid? This is where technology can come into play. We have the tools now to do things in the classroom that previous teachers couldn’t imagine.

Let me give you an example: you are sitting in my class and we are solving systems of equations. Ten years ago, you would have solved the system and got an answer of 6 = 4. You might think: 6 = 4? What does that mean? If I had asked you to then graph both of those equations, you would have groaned, and about 10 minutes later (after taking time to solve each equation for y or – worse yet – finding coordinate pairs), you would have had a graph of two parallel lines (that is, assuming you plotted all your points correctly). By this point, you would have likely forgotten what it was you were even checking. Today, we could plug those equations into a graphing software program and notice that the lines never touched each other. Interesting…we could then have an awesome conversation about what it is about 6 = 4 and parallel lines. What would you think happened if we solved a similar system and got 2 = 5? Students would be intrigued to notice that the lines were parallel again. I have done this in my class and by the time we uncover that a “no solution” algebraically means the lines are parallel, the students are so *excited* about what they are doing. Not only are they excited, but the tool has truly been transformational because it takes something that would have taken 90 minutes to do, and allowed it to be done within 45 including time to analyze and think critically.

This is just one example of using technology as a powerful tool. If we are going to incorporate technology to teach our 21st century learners, then it should be for a powerful or transformational purpose instead of a trivial one. (Prensky, 2012)

The other area that I really learned a lot in this course was how to use online tools for professional development. With cuts to professional development, we don’t get to attend many conferences and workshops. Even if you do get to go to a conference, you most likely need to miss a day of school with your students and write sub plans, etc. However, there are many tools out there waiting for teachers to utilize, and they won’t need to take you out of the classroom!

My uncle uses twitter a lot as professional development tool. I hadn’t seen the value to it lately until I actually got a twitter account and did some research of various hashtags and topics to follow. I realized that twitter is a place where teachers can go and search for information on nearly any topic, and look for new leaders to follow. (Boss, 2011)

Another reason to use twitter as a professional development tool is because it can give you another source to turn to if you need help. Whether looking for ideas on a topic, for feedback on an idea, or a place for encouragement, you become part of a community that is similar to the teachers in your hallway. (Ferriter, 2010) Maybe even a better community if more people have a growth mindset.

When it is all said and done, I feel that I have grown professionally as a result of this research. I plan to use twitter (along with other professional development tools) to keep improving my career as a teacher.

References:

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